

# SUCCESSFUL CASE OF NEPHRORRAPHY FOR FLOATING KIDNEY.

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## UNCOMPLETED NEPHRECTOMY.

BY

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PROFESSOR OF SURGERY IN THE WOMAN'S MEDICAL COLLEGE OF PENNSYLVANIA.



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## SUCCESSFUL CASE OF NEPHRORRAPHY FOR FLOATING KIDNEY.

BY W. W. KEEN, M.D.,

PROFESSOR OF SURGERY IN THE WOMAN'S MEDICAL COLLEGE OF PENNSYLVANIA.

[Read March 27, 1889.]

Miss E. J. F., of Sunbury, Pa., aged thirty-five, height four feet eleven inches, weight ninety-two pounds, was sent to the Woman's Hospital on October 4, 1888, by Dr. Mary A. McCay, with a diagnosis of floating kidney. For the following notes I am indebted to Dr. Chapin and Dr. McKee, resident physicians. The patient was delicate as a child; menstruation began at fifteen, and was always painful and irregular. At eighteen years of age she was thrown from a wagon, falling forward with considerable force on her chest and abdomen. Shortly after the fall she suffered with severe pain in the right side and a great deal of distress across the back. Menstruation ceased for six months, and was followed by dropsy and severe illness. There was frequent inclination to vomit, and a great deal of palpitation of the heart. In spite of constant medical attention, she dragged out a miserable existence. About seven years after the fall she noticed a movable tumor in the abdomen, which Dr. McCay believed to be a floating kidney.

*Present condition.*—Appetite and sleep poor; urine 1020, slightly alkaline, twenty-nine ounces in twenty-four hours, no albumin, no sugar. Heart and lungs normal; uterus retroflexed. In the right abdomen was a tumor, about the size of the kidney, which could be freely and easily pushed two or three inches to the left of the middle line back into the right lumbar region, or down into the right iliac fossa. Neither the hilum nor the bloodvessels could be distinctly made out. Percussion over the position of the right kidney showed a tympanitic note, the left renal dullness being distinct and normal. The tumor was evidently not connected with the uterus, ovary, or liver.

*Operation, October 26, 1888.*—Ether was administered. An oblique incision was made at the outer border of the quadratus lumborum four inches long. So soon as the abdominal fat was discovered, search was made for the kidney. The colon was first found, but the kidney was absent from its normal position. Strong pressure being made on the abdominal tumor, it was partly pushed back into position, but could even then only be touched by the finger-tip. On separating the borders of the incision by retractors, it was seen to be the kidney, bare of all fat. In order to replace it entirely, it had to be seized by a volsella. Seven carbolized silk sutures were next introduced by a Hagedorn needle, four posteriorly and three anteriorly, through the capsule and

substance of the kidney, by which it was attached to the muscles and aponeurosis of the abdominal wall. Seven deep sutures of chromicized catgut were then introduced through the entire muscular wall of the loin, but they were not tied, as I intended that the wound should remain open for a few days, if not permanently, in order to produce cicatricial tissue between the kidney and the muscular wall. No provision for drainage was necessary of course. The wound was covered with an ample bichloride gauze dressing. Her recovery was entirely uneventful. Her highest temperature was 100.9°. The urine was entirely free from any blood, though the bladder was irritable and the catheter had to be used for several days. The wound was so completely filled up within the first forty-eight hours, that I removed the stitches that had been passed through the muscular wall. I kept her flat on her back for four weeks, when she was allowed to rise for a short time. There was considerable, apparently rheumatic, pain in the small of the back for three or four weeks after the operation, which disappeared and again reappeared, and which seemed to be benefited by salol. Seven weeks after the operation there was a moderate amount of albumin in the urine, which disappeared after the use of Basham's mixture for three weeks. Soon after she got out of bed, I tried the effect of a pad to support the kidney in front, but its use caused so much discomfort that I abandoned it, trusting wholly to the silk sutures and cicatricial tissue to hold the kidney in place. The tumor formerly discovered in the abdomen was entirely gone, and the normal renal dulness reëstablished, though a little lower down. She went home on the 5th of January, 1889. I heard from her to-day, March 16, 1889, and she says: "My back is still weak, but the pain is fast disappearing. The kidney is still firmly anchored, and I am feeling better generally. Words cannot express my gratitude to you for what you have done for me."

REMARKS. *First, the cause.*—A lax abdomen following frequent pregnancies has been supposed to be the origin of floating kidney, as it is of floating liver. In the case here narrated, the patient was unmarried, and the abdominal wall was not at all lax. Again, the absorption of the perinephritic fat has also been supposed to be a cause, but in this case as soon as the abdominal wall was penetrated the perinephritic fat was at once encountered. But it was a noticeable fact that the kidney itself was entirely free from fat. In other words, the fatty bed in which the kidney should lie was in its proper place, but the kidney was displaced and there was no fat on the kidney itself. It seems reasonable to conclude that the dislocation of the kidney was due to the fall at the age of eighteen, though the abdominal tumor was not discovered till seven years later. Landau, who has written the best monograph both upon floating kidney and floating liver, states that of 314 cases of floating kidney, 273 were in women as against 41 in men. In 178 cases, it existed on the right side in 151, on the left in 13, and in 14 on both sides. The present

case being in a woman, and upon the right side, emphasizes still further his statistics.

*Secondly, the symptoms.*—Digestive disturbances, especially constipation and very fetid breath, were not marked, though they were present to a moderate degree. The chief trouble was pain and constant discomfort, which was not only physical, but mental, the very existence of the tumor being a source of constant worry. The tumor itself was not especially tender to the touch, but it created a constant aching pain. Neither the hilum nor the pulsating renal artery could be distinctly made out, but the character of the tumor and the altered renal dulness made the diagnosis quite clear.

*Thirdly, the treatment.*—Recumbency alone has been advised by Landau, but this seems to me altogether too expectant. Only the most sanguine could believe that by this treatment, if such it can be called, a kidney would resume its normal position and quietly continue there sufficiently long for the adhesions to be reëstablished with any prospect of permanency.

I did not try any treatment by pad or bandage, as the patient was from a distance and could not remain the long time necessary to decide whether such palliative treatment would answer. On the other hand, extirpation of the organ was equally foreign from my thoughts. In my opinion, this should only be done after failure of an attempt at fixation. The danger to life of a floating kidney is absolutely *nil*. It is, therefore, only to remedy the discomfort that exists that we operate. Hence, I do not think extirpation at all justifiable unless we first attempt to fix it *in situ*, and having so failed, it is only justifiable even then in case the discomfort is very great. Dr. Maurice H. Richardson (*Boston Med. and Surg. Journ.*, June 14, 1888), who has published an excellent paper with a full bibliography, quotes from Brodeur the following figures: Of 235 nephrectomies, 125 were done by lumbar incision, with 47 deaths (37.6 per cent.), 110 by abdominal incision, with 55 deaths (50 per cent.). As against this large mortality from nephrectomy, however, Gross has collected 17 cases of nephrorraphy, with only 1 death, a mortality of only 6 per cent. It should be added also, that in the fatal case (Ceccherelli, *Centralbl. für Chir.*, 1884, 44, 743) the surgeon passed the stitches around the twelfth rib, a procedure which is absolutely needless as well as dangerous.

Hahn (*Centralbl. f. Chir.*, 1881, p. 449) first proposed fixation for a floating kidney by operative procedure, and practically perfected the operation. The operation is simple. The patient being laid upon



the side, an oblique incision is made at the outer border of the quadratus lumborum. The edge of this muscle being recognized, the perinephritic fat is found immediately in front of it, at its outer border. This fat having been cut or torn through, the kidney may be seen at once; but if it is very movable, it may be so far displaced as not to be seen, or, as in the present case, may be even felt with difficulty by the tip of the finger, even when an assistant pressed it firmly back through the abdominal wall.

Mr. H. Morris (*Surgical Diseases of the Kidney*, p. 45) makes a distinction between a kidney which has no mesonephron but moves about freely behind the peritoneum, this being called "movable kidney," and a "floating kidney" which does possess a mesonephron, and therefore floats freely in the peritoneal cavity. In cases, therefore, of a strictly floating kidney, it would be necessary to open the peritoneal cavity before it could be fixed in the loin. This distinction is confirmed by the four cases of dissection to which Mr. Morris refers. Comparing them with the present one, the range of movement to the left of the umbilicus and into the right iliac fossa was so great in this case, that it would seem proper to call it a "floating kidney," yet, at the operation, no renal mesentery or mesonephron was found. The probable mode of its production would also militate against the existence of any mesonephron. The kidney was far away from its normal position, but when pushed back into its proper place no layer of the peritoneum could be found that by any possibility could be called a mesonephron, and the peritoneum was certainly not opened.

In spite of the fact that Paoli (*Centralbl. f. Chir.*, 1885, 51, 910) cut through the twelfth rib in order to obtain room, it would seem to be rarely necessary to do so. When found and pressed back, the kidney should be fixed as nearly as possible in its normal position. Usually it will be impossible to replace it as high as it was at first, but lowering the site by two inches is not uncommon and seems to be of no importance.

The sutures that have been employed (either of silk or of catgut—disinfected, of course) may be passed (1) through the capsule of the kidney, or (2) through the parenchyma and capsule both, and may either be (3) left permanently or (4) removed. In this case I employed antiseptic silk, which I consider decidedly the best, and passed the stitches not only through the capsule, but through the parenchyma of the organ itself, three on the anterior surface and four on the posterior, stitching the kidney to the muscles and, what I consider more

important, to the aponeurosis which exists on each side of the incision. Finally, these stitches were not removed, but were left *in situ*. I believe with Svennson (*Centralbl. f. Chir.*, 1886, 824) that many failures have been due to employing absorbable catgut, to the avoidance of passing the stitches through the substance of the kidney, and to removal of the stitches, which in all cases I think should be left in, whatever the material employed. Svennson inserted as many as fourteen silk stitches, which were left in place and caused no trouble. The wound is best left to heal by granulation. I introduced a number of stitches to close the abdominal wall if necessary, but in twenty-four hours it was so filled up that it was evidently a needless precaution. The larger amount of cicatricial tissue that is produced by leaving the wound to heal by granulation probably fixes the kidney more firmly.

Another very important point is, that the patient should lie flat on the back for at least a month after the operation, in order that the cicatricial tissue binding it in place may become thoroughly developed and firmly established. Even then, I would advise some support for the kidney in front by a pad or bandage, provided the patient bears it well. In this case I soon abandoned it, as it caused too much discomfort. It is to be noticed that though the stitches were passed through the kidney substance, the patient had no hematuria (this was carefully watched for) and that no inflammation or reaction seemed to follow. But seven weeks after the operation considerable pain developed in the region of the kidney together with some albuminuria. This disappeared, however, after the use of Basham's mixture. The pain seemed to be rheumatic, and was soon relieved by the administration of salol.





## UNCOMPLETED NEPHRECTOMY.

CALCAREOUS VESSEL MISTAKEN FOR A CALCULUS BY THE NEEDLE TEST. OPERATION ABANDONED ON ACCOUNT OF ADHESIONS. DEATH. AUTOPSY. PRIMARY ENCEPHALOID OF THE KIDNEY.

By W. W. KEEN, M.D.,

PROFESSOR OF SURGERY IN THE WOMAN'S MEDICAL COLLEGE OF PENNSYLVANIA.

[Read March 27, 1889.]

G. M. C., aged sixty-eight, weight one hundred and sixty-four pounds, six feet two inches tall, was sent to me through the kindness of Dr. E. W. Watson, on October 31, 1888, with the following history.

On April 6, 1886, he had an attack of retention of urine. Violent expulsive efforts forced out a clot. The bleeding continued two or three days. With this he had pain in the right lumbar region. A month later another similar attack occurred, the pain on this occasion being quite severe and amounting to a distinct renal colic. Other attacks, always accompanied by pain and bleeding, occurred in July, 1886, and in January, September, and November, 1887. After the last one, for several weeks he had repeated and nearly continuous hematuria with a sensation of heat in the right lumbar region, and he lost strength and appetite.

January 14, 1888, he was taken extremely ill with pleuro-pneumonia and septicemia. Both legs were attacked with phlegmasia. The dulness in the right kidney, Dr. Watson stated, was increased, but no pus was found in the urine either then or at any other time; neither were any symptoms located in the bladder. This illness lasted about two months.

In May and June of 1888 he again had attacks of hematuria, and from September 17 to October 31, 1888, he has had nine attacks, passing as much as six or eight ounces of blood, he thinks, in some of the attacks. He has never passed any calculus. In the interval between the attacks the urine was clear. No cause can be assigned for the attacks; not uncommonly they have come on while he was lying in bed. He states that the right kidney is now the seat of marked aching pain.

*Present condition.*—He is a very tall man with a disproportionately long chest; from the ribs to the crest of the ilium the space is barely two fingers in breadth. The bladder was sounded, but no stone was found. Its walls were rugose. The prostate not much, if at all, enlarged. Renal dulness on the

two sides equal and normal. Right kidney tender. Two specimens of urine were furnished, one with a large bloody sediment, but without clots, and the other clear and acid, sp. gr. 1020; very slight amount of albumin. Microscopical examination showed no crystalline elements, a few blood discs, granular matter, and a large number of bright fatty-like small globules. Dr. Watson informed me that he had never found any albumin except just after the attacks of hematuria, nor has he ever seen any cast.

It was decided to explore the right kidney, either for stone or possibly for cancer, and either to remove the stone or the kidney, as might seem best.

*Operation, November 3, 1888.*—Present, Drs. E. W. Watson, A. W. Watson, W. J. Taylor, and T. R. Neilson.

An oblique incision, four inches in length, was made just to the right of the crector spinæ, and the perinephritic fat was reached. Surrounding the kidney was a capsule so loose and distinct that it required a very careful examination to be sure that it was not the wall of the colon. The lower end of the kidney appeared normal. The finger detected a rather sharp irregularity deep in the substance of the kidney. The moment it was pressed on, both Drs. Taylor and Neilson, as well as myself, were convinced that it was a stone. A needle was then passed into the kidney, and the point of it grated with great distinctness against the supposed stone. The kidney was now seized with a volsella, and was loosened from the surrounding tissues in order to obtain freer access to it. This was followed by two results: First, very abundant, indeed very alarming hemorrhage, from large veins that were so concealed under the last rib that they were seized with great difficulty, even after the rib was well raised, and when seized they were so friable that the ligatures would not hold.

The second result of this operation was to disclose the fact that while the small portion of the kidney first discovered was normal, the rest of it was irregular, nodular, and friable, and evidently the seat of a malignant growth. Accordingly, I determined to remove the kidney, if possible. It was rapidly detached from its capsule by the finger, but it was so anchored internally at the hilum that it could not be brought to the surface, in spite of the fact that I got my entire hand into the cavity of the capsule.

Having proved the impossibility of removing the kidney by the loin, I debated the question of attempting it by an anterior incision, but as the difficulty of removal was not the size of the kidney, but the adhesions at the hilum, I concluded not to attempt an operation by this route, as I felt convinced it would result in the patient's dying upon the table. The hemorrhage had been exceedingly profuse, not from any one particular vessel, or from rupture of the vessels of the hilum, but from every point in the kidney and in the capsule the moment they were separated. This hemorrhage was checked by thoroughly packing the wound with sublimate gauze. The patient was put to bed. He became conscious and recognized his family, but died from exhaustion three and a half hours after the operation.

*Autopsy, twenty hours after death.* In order to determine whether I could have removed the kidney more readily by the anterior incision, I made this attempt as the first step in the autopsy. An incision was made in the right linea semilunaris. This incision measured four inches in length, extending from the border of the ribs to Poupart's ligament. No more room, therefore,

was obtained for the removal of the kidney anteriorly than posteriorly. The ribs projected so far downward that, in order to reach the kidney, it was necessary to insert my entire hand up to the wrist. The kidney lay far up under cover of the ribs, and was as inaccessible from the front as from the back. It was so thoroughly anchored in its position that to loosen it from its bed required force that would have been wholly unjustifiable during an operation, and would have resulted in rupture of the vessels and in immediately fatal hemorrhage. It would not have been possible to reach and tie the vessels in such an inaccessible position. When removed, the kidney was found to be enlarged, nodular, and distinctly cancerous. The left kidney and other abdominal viscera were normal.

On section of the kidney there were discovered some calcareous vessels and one or two points of calcification of the other tissues. The kidney measured seven and a quarter inches in length, four and three-quarters inches in width, and three and one quarter inches in thickness.

Microscopical examination by Dr. J. P. Crozer Griffith showed that it was an intermediate form between scirrhus and encephaloid, with a decided preponderance in the greater part of the organ of the latter form of the disease.

REMARKS. *First, diagnosis.*—This lay most likely between stone in the kidney and cancer of the kidney. Although it seemed unlikely that stone should exist without producing pyelitis and, therefore, showing some pus in the urine, yet I have known of more than one case of both stone in the bladder and in the kidney in which the urine contained no pus. The repeated hematuria looked very much toward malignant disease, but the kidney was so under shelter of the ribs that it was impossible to detect any tumor, and the dulness was not markedly increased. The enlargement of the kidney was chiefly toward the hilum, and so the dulness posteriorly was little greater than normal. Mr. Henry Morris states that of 30 cases of cancer of the kidney, found in 2,610 autopsies, 25 were secondary and only 5 were primary. The present specimen is undoubtedly a primary malignant tumor, and is, therefore, a rare form of disease.

*Secondly, the surgical aspect of the case.*—In this there are two points of interest: First, the needle test for stone. When the kidney was exposed to view, the only healthy portion of it remaining was first seen. Deep under this an irregular, hard mass could be felt, which might easily be a stone. Puncture by the needle convinced us that it was such. Examination of the kidney after death showed us that no stone existed, but that what was felt by the point of the needle was either a calcareous vessel or a calcareous degenerative mass against which the point of the needle grated. It gave precisely the same sensation as a stone would have done. This possible error seems to me

very unusual. I have never seen it noticed, although it may have escaped my knowledge.

Secondly, the advantages of the lumbar or of the abdominal route for removal. As the operation was undertaken primarily for exploration, and no tumor in any sense was discovered, I am clearly of opinion that the lumbar route was the proper one to select. The attempt made at the autopsy shows that the kidney could not have been removed any more readily by the abdominal than by the lumbar incision. The peculiar situation of the mass in question, and the low position of the ribs, resulted in the curious fact that while the space between the last rib and the crest of the ilium was only two fingers in breadth, yet the oblique incision here of four inches was long enough for removal, and it could have been still further prolonged anteriorly if necessary; whereas, the vertical incision from the rib to Poupart's ligament was absolutely limited to four inches, and the kidney was certainly no more accessible by this route than by the other. The removal of the kidney was practically impossible by either method. The inflammatory attachments—especially around the hilum and the great vessels of the kidney—required an amount of force that would have been unjustifiable during life.